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ABSTRACT

This curriculum guide was developed for use with public television's Nature series. The materials in the guide are designed to help students actively participate in the study and experience of nature. Students are encouraged to view the programs as naturalists would, observing animals in their environment, noting their behavior, and drawing conclusions. Each lesson in the Teacher's Resource Guide includes: (1) a "Program Overview" that presents background information and brief synopses of the program to be viewed; (2) "Objectives" that provide the teacher with measurement goals; (3) a "Before Viewing Activity" that familiarizes students with the subject and allows them to set purposes for viewing; (4) "Vocabulary" that features definitions of unfamiliar words used in each program; (5) "Discussion Questions" that help students assess the main points of the program; (6) "Suggested Reading" for students who may want to learn more about the topic; and (7) a "Naturalist's Guide" (student worksheet) to be duplicated and distributed to students. The programs highlighted in this guide focus on the fascinating relationships between humans and animals. Program titles include "Parrots: Look Who's Talking," "The Elephant Men," "Hunters of the Sea Wind," "Extraordinary Dogs," and "Monkey in the Mirror." (WRM)

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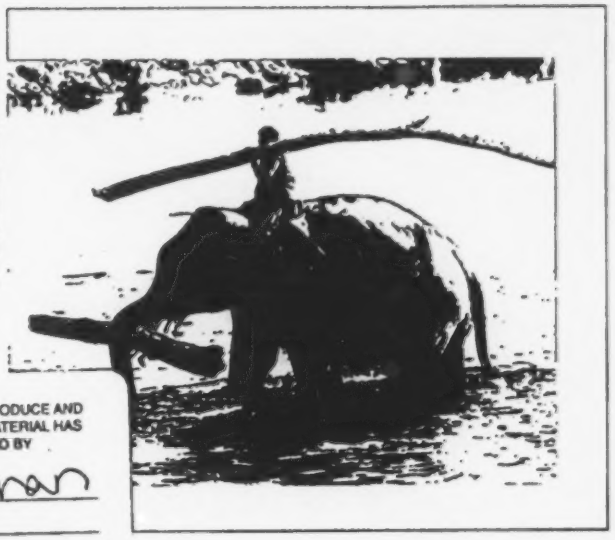
Teacher's Guide

ED 460 843

NATURE™



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ANIMALS AND US:

HOW WE LIVE TOGETHER

U.S. DEPARTMENT OF EDUCATION
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Canon Thirteen WNET

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Dear Educator:

Canon U.S.A., Inc. is pleased to be a sponsor of the PBS NATURE series and to send you this Teacher's Guide.

NATURE brings the wonders of the natural world into our homes in a unique and informative manner. The programs in this guide—"Parrots: Look Who's Talking," "The Elephant Men," "Hunters of the Sea Wind," "Extraordinary Dogs," and "Monkey in the Mirror"—give you and your students the opportunity to gain new insights into the lives of animals and the work of naturalists. This Teacher's Guide highlights special relationships between people and animals—in domestic settings, and in the wild.

At Canon, we hold the environment in high regard. By teaching students about the natural world, we feel they will develop an appreciation of our planet and will be better able to protect it in the years to come.

There is no greater mission than that of the teacher. We trust that this Teacher's Guide will provide you with some tools to make your challenges easier.

We salute your efforts and wish you all the best in preparing our children to better understand our global environment and the people who make up our world.

Sincerely,

H. Murai

H. Murai
President

Alex Trotman
Chairman of the Board

Ford

Ford Motor Company
The American Road
P.O. Box 1899
Dearborn, MI 48121-1899

Dear Educator:

For the third consecutive year, the men and women of Ford Motor Company are proud to bring you this Teacher's Guide for the PBS series NATURE.

This educational series, with its emphasis on wildlife, its habitats and their preservation, as well as the concerns of naturalists, parallels our efforts to protect the environment and be a responsible automotive company. Our employees have a vision to provide more people in more places with products that will not only raise our standard of living, but will also raise the banner of environmental stewardship.

The programs featured in this year's Guide illustrate how people and animals are affected by each other; how they frequently depend on each other and sometimes even resemble each other. This Teacher's Guide will help our young people to become more keenly aware of the complex relations between people and animals around the world —from the bond between people and their pets to the use of animals for service and work; from the fishermen and the dolphins of the Gulf Stream to researchers and their primate subjects.

Ford and the more than 300,000 employees who comprise its global team hope you find these materials useful in making the most of NATURE and increasing the environmental awareness of our youth.

Alex Trotman

Alex Trotman

For information on how Ford Motor Company is finding new ways to make building and driving its vehicles easier on the world around us — from researching alternative fuels to reducing waste in its plants, to using recycled materials in the cars and trucks it produces — please call 1-800-ALT-FUEL (1-800-258-3835); M – F, 8:00 a.m to 5:00 p.m. EST. And, thank you for your interest.

INTRODUCTION

This Teacher's Guide has been developed for use with public television's NATURE™ series. This year's guide looks at fascinating relationships between humans and animals. Animals and humans relate to each other in an impressive variety of ways: from the affectionate bonds formed between pets and owners to deadly encounters between game animals and hunters; from labor performed by work animals for farmers to the life-or-death missions of search and rescue dogs after avalanches.

We have chosen five programs that feature many of these human-animal interrelationships, and we have focused on these interactions in our lessons plans and student worksheets. These programs and lessons will be of great interest to youngsters who have pets, love animals, and wonder how we live together. We hope you enjoy this Teacher's Guide.

"Parrots: Look Who's Talking" shows the close bonds between parrot owners and their pets, as well as the behavior of parrots in their natural habitats. "The Elephant Men" documents the domestication of the wild elephants that have been clashing with humans in West Bengal, India. "Hunters of the Sea Wind" depicts the journeys of predators and their prey in the ocean currents from the coast of Panama to Costa Rica. "Extraordinary Dogs" features the many difficult and daring jobs that dogs perform for people. "Monkey in the Mirror" looks at the behavior and development of chimpanzees, monkeys, and other apes, as well as their interactions with humans.

THE EDUCATIONAL MATERIALS

This guide has been designed to help teachers and students use the public television series as a starting point for active participation in the study of nature. Students are encouraged to view the programs as a naturalist would, observing animals in their environment, noting their behavior, and drawing conclusions.

Each lesson in the Teacher's Guide includes:

- a *Program Overview*, which gives background information and a brief synopsis of the program to be viewed;
- *Objectives*, which provide the teacher with measurable goals;
- a *Before Viewing Activity*, familiarizing students with the subject and allowing them to set purposes for viewing;
- *Vocabulary*, which provides definitions of unfamiliar words used in each program;
- *Discussion Questions* that help students assess the main points of the program;
- *Suggested Resources* for students who may want to learn more about the topic; and
- a *Naturalist's Guide* (student worksheet), to be duplicated and distributed to students. This student worksheet contains activities that encourage students to view the programs as a naturalist would in order to gain a better understanding of animals, their habits and habitats, and other factors that affect their existence. The guides encourage family viewing and contain cooperative learning activities.

CREATING A NATURALIST'S DIARY

Naturalists keep diaries to record their observations. In order to complete activities presented in this guide, students will need to make diaries of their own. Students may set aside part of their science notebook, or they may choose to make a separate booklet for this purpose. Diaries may include news clippings, drawings, photos, maps, charts, graphs, and other information, as well as records of observations. Students may wish to share their diaries with others or use their entries to develop a bulletin board display that reflects what they have learned as naturalists.

PROGRAM SCHEDULING

Programs are scheduled to be broadcast on the dates indicated below. Broadcast dates, however, may vary slightly from area to area. Please check local listings for any scheduling changes.

Program	Broadcast Date
"Parrots: Look Who's Talking"	February 9, 1997
"The Elephant Men"	February 16, 1997
"Hunters of the Sea Wind"	March 2, 1997
"Extraordinary Dogs"	March 9, 1997
"Monkey in the Mirror"	April 6, 1997

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OBJECTIVES

Students will:

- observe and examine the qualities and behaviors of parrots, including their use of camouflage to hide from predators and their ability to mimic human speech; and
- explore the ways in which domesticated parrots and people interact, and speculate on the reasons for their close bonds.

VOCABULARY

You may wish to introduce students to the vocabulary before viewing the program.

camouflage *noun:* the ability of an animal to blend into its environment, often to hide from predators, or, in the case of predators, to creep up on their prey without being seen.

captivity *noun:* a situation in which a creature is not free in the wild, but is cared for by humans.

mimicry *noun:* the ability of an animal to imitate another animal's appearance or behavior, such as the ability of parrots to imitate human speech.

plumage *noun:* all the feathers of a bird.

preen *verb:* the bird's action when it grooms or cleans its feathers.

quarantine *noun:* a period of time during which imported animals are isolated from other creatures to prevent the spread of disease or pests.

SUGGESTED RESOURCES

Doane, Bonnie Munro. *The Parrot in Health and Illness: An Owner's Guide.* New York: Howell Book House, 1991.

León, Vicki. *Parrots, Macaws, and Cockatoos.* New York: Silver Burdett Press, 1995.

Sparks, John, and Tony Soper. *Parrots: A Natural History.* New York: Facts On File, 1990.

The Online Book of Parrots
http://www.ub.tu-clausthal.de/p_welcome.html

Pet Station
http://www.Petstation.com

The Electronic Zoo
http://netvet.wustl.edu/e-zoo.htm

PARROTS: LOOK WHO'S TALKING

BROADCAST DATE: FEBRUARY 9, 1997

PROGRAM OVERVIEW

Humans love parrots for a variety of reasons. These extraordinary creatures' intelligence, playfulness, beauty, and loyalty make them endlessly fascinating. Some of the 315 species in the parrot family, such as parakeets, macaws, and lorikeets, display exotic plumage that reflects all the colors of the rainbow. But, as this program illustrates, people are especially charmed by the parrot's incredible gift for mimicry of human speech.

"Parrots: Look Who's Talking" examines how these birds thrive in the wild and what makes them the third most popular type of pet in our homes. The program explores how some species' all-green plumage enables them to blend in with their environment. Other species in the parrot family, such as the hyacinth macaw, have brightly-colored feathers; this helps them attract potential mates.

Parrot researchers have found impressive evidence of the birds' intelligence. For example, the program presents Alex, the "Einstein of the parrot world," who has been studied at the University of Arizona. Alex correctly answers questions about the size and color of different objects. Elsewhere in this program, parrots dazzle their human companions by playfully singing and dancing. Indeed, humans and parrots seem to be birds of a feather.

Theme: "Parrots: Look Who's Talking" explores the special qualities that make parrots excellent companions for humans and vice versa.

BEFORE VIEWING THE PROGRAM

Introducing the Program

Invite students to guess the three most popular animal companions for humans. Students will probably guess correctly that dogs and cats fill the top two positions, but may be surprised that parrots rank third. Inquire how many students have parrots as pets or know others who do. Why do parrots and humans get along so well together? Encourage students to surmise their responses. You may also mention that the survival of parrots in the wild, like that of turtles, is threatened because of their popularity as pets.

Distribute the Naturalist's Guide (student worksheet)

Duplicate and distribute the Naturalist's Guide (student worksheet) to students and preview it with them. Encourage your students as they watch the program to look for ways parrots and people interact. What needs do they satisfy for each other? In what ways do parrots act like humans? In addition, ask students to keep track of some the ways in which various parrot species are different from each other.

AFTER VIEWING THE PROGRAM

Encourage students to discuss the program and share their observations. The following questions may be used to spark discussion.

1. What are some of the reasons humans find parrots so appealing? (People are impressed with parrots' colorful feathers; their ability to mimic human speech and song; their playfulness; intelligence; curiosity; sense of humor; and loyalty. Parrots are social, and live a long time—sometimes longer than their owners.)

2. What happens to pet parrots who are neglected or left alone? (Since parrots are social animals, neglect causes them to suffer from a variety of behavioral and physical problems.) How do their needs compare with those of your pet, or pets you may know of? (Answers will vary.)

3. This show's narrator asserts that "the bill is the essence of a bird." How does a bird's bill determine what it can eat and where it can live? (Parrots with large, powerful bills can survive in areas where nuts with thick shells grow. Other parrots who get their nutrients from flowers have long tongues, which help them sip nectar and scrape pollen from flowers.)

4. What evidence do scientists have that parrots are intelligent creatures? (Some parrots are able to correctly answer questions. The intelligence of parrots is also illustrated by their clever resourcefulness in finding food in the wild.)

PROGRAM DATE:_____ TIME:_____ CHANNEL:_____

PARROTS: LOOK WHO'S TALKING

A naturalist examines the ways in which different animal species help each other survive.

Complete both activities.

BIRDS OF A FEATHER

Not all of the more than 300 species in the parrot family are alike. Some of the birds in the program have only green feathers. Other birds have brightly colored feathers. In addition, as you observe this program, take notes on the birds you see in the wild. How do the colors of the various birds' feathers (plumage) help them in the wild? You should also note whether the male and the female of a species appear different from each other. In addition, look for the ways that different birds' beaks help them get the food they need. You may need to research some information in the library or on the Internet.

TO THE FAMILY

You are invited to view NATURE. As you watch the program, look for the various ways in which parrots and people are similar and how they help each other. After the program, share what you've learned with your family.

PARROTS, PARROTS EVERYWHERE!

Species	Where They Live	Plumage How do the birds' feathers help them survive?	Beak How do the birds' bills help them get food?
Keas	New Zealand	Green — helps them blend in with forest Red under wings — for communicating with other keas	
Parakeets			
Hyacinth Macaw			Huge, curved bill Most powerful bill of any bird — for cracking very hard nuts

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Parrots are popular pets because of their beauty, loyalty, and gift for mimicry.

PARROT PERIL

People are fascinated by parrots' graceful beauty and their uncanny ability to mimic human speech. Unfortunately, their highly appealing qualities can lead to trouble. Every year, parrots and other exotic creatures are captured in their native habitats and smuggled into other countries and sold as pets. Using resources from your library, create a presentation for your class or write a report about the ways in which parrot smuggling endangers the lives of these special birds. You may also want to look up the addresses of organizations that you and your class can contact to help prevent the endangerment of parrots and other exotic creatures.

These materials were made possible by Canon U.S.A., Inc. and Ford Division of Ford Motor Company.

OBJECTIVES

Students will:

- examine the competition between elephants and humans for living space in India;
- understand some traditional methods used by mahouts to train elephants; and
- explore how the people of India handle the struggle between survival and their religious beliefs.

VOCABULARY

You may wish to introduce students to the vocabulary before viewing the program.

domesticate *verb:* to tame an animal so that it is capable of living with humans, and humans are able to live with it.

Ganesh *noun:* a Hindu god, whom many Indians believe has been reincarnated as an elephant.

koonkies *noun:* specially trained elephants in India, used to capture other elephants.

mahouts *noun:* people in India who capture, train, and drive elephants. (The elephants' keepers.)

"the stick and the carrot" *noun:* process for training an animal in which the animal gets a reward if it follows an instruction, and is punished if it disobeys.

SUGGESTED RESOURCES

Beagle, Peter, and Pat Derby. *In the Presence of Elephants.* Santa Barbara: Capra Press, 1995.

Grace, Eric S. *Elephants.* San Francisco: Sierra Books for Children, 1993.

Preller, James. *Kratts' Creatures: Off to Elephant School.* New York: Scholastic Inc., 1996.

Shoshani, Jeheskel. *Elephants: Majestic Creatures of the Wild.* Emmaus, Pennsylvania: Rodale Press, 1992.

Asian Elephant
http://www.lpzoo.com/animals/mammals/facts/as_elephant.html

Asian Elephants In The Wild
http://www.panda.org/research/w-elephants/page1.htm

THE ELEPHANT MEN

BROADCAST DATE: FEBRUARY 16, 1997

PROGRAM OVERVIEW

In India, there are few places for elephants to live where they don't clash with humans. Villagers in West Bengal, India, had a big problem with the elephants that live in the nearby forests. The huge animals were trampling their rice fields, eating their crops, and even killing people who happened to be in the wrong place at the wrong time. The elephants had to be protected, however, because the Indian people believe that their Hindu god Ganesh was reincarnated as an elephant, and therefore elephants can never be killed. To save the crops and lives of its people, the Indian government hired Dr. Khrishnamurthy, who has been a wildlife veterinarian for 40 years and is a leading authority on the elephant, the largest land mammal.

To help catch and domesticate the wild elephants thought to be interfering with farmers, Dr. Khrishnamurthy turns to "the elephant men," known in India as the "mahouts." These men use traditional methods to capture and train these enormous creatures, techniques that have been passed from father to son for 5,000 years.

"The Elephant Men" takes the viewer on the journey this renowned vet and the mahouts undergo as they lasso the wild elephants and, using traditional methods, domesticate these majestic, powerful creatures.

Theme: "The Elephant Men" presents the struggle for resources between elephants and humans in India, and explores the traditions that lead to a solution.

BEFORE VIEWING THE PROGRAM

Introducing the Program

Using a world map or globe, have students locate India and then West Bengal in Northeastern India. Explain that in this area, herds of wild elephants have been raiding the farmers' rice fields, eating their crops, and attacking any people who get in their way. Ask students what solutions they can suggest for this problem. After you have received a number of responses, add this crucial piece of information: the Indian people believe that the elephant is sacred—the incarnation of a Hindu god (Ganesh)—and therefore can never be killed or injured. Now invite further ideas about how to handle this problem. Tell the students that one way the Indian government is dealing with the problem is by working with "the elephant men" (or mahouts) who use special techniques for catching and domesticating wild elephants.

Ask students if they can think of other situations in which wild animals and humans clash or have clashed in the past. Were these situations always handled in the best way? Who decides what the best way is?

Distribute the Naturalist's Guide (student worksheet)

Duplicate and distribute the Naturalist's Guide (student worksheet) to students and preview it with them. As they watch the program, students should observe the variety of relations between people and elephants. Encourage students to take notes on the techniques used by the mahouts to tame and train the elephants.

AFTER VIEWING THE PROGRAM

1. What are some of the methods used by the mahouts to catch and domesticate the wild elephants? (The mahouts use specially trained elephants called koonkies to help them capture the wild elephants. A mahout establishes that he is in charge by becoming an elephant's only source of food. He washes the elephant. In addition, he rewards the elephant with sugar cane if it obeys and thrashes it if it causes trouble. The process of domesticating a wild elephant usually takes about two months.)

2. Dr. Khrishnamurthy states that next to primates, he considers the elephant to be "the most intelligent animal." Do you agree? Why or why not? (Elephants are able to learn to respond to subtle verbal commands from the mahouts. Naturalists have also documented that elephants have a complex society; the animals even mourn when one of their own dies.)

3. The mahouts have passed on their special knowledge of training elephants for 5,000 years. What would happen if these traditions were to die out? (Answers will vary.)

NATURALIST'S GUIDE STUDENT WORKSHEET a Thirteen/WNET NATURE℠ program

PROGRAM DATE:_____ TIME:_____ CHANNEL:_____

THE ELEPHANT MEN

A naturalist examines the interrelationships among different species.

Complete the first activity and one other activity of your choice.

MAHOUT FOR A MONTH

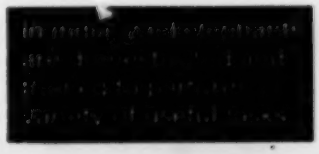
Imagine that you're a mahout. Other members of your community have captured some wild elephants, and you have been assigned to work with one of the more experienced mahouts to learn the traditional methods. Create a series of postcards telling your family about your new experiences in domesticating a wild elephant. You may wish to review the part of the program where a mahout writes a letter home to his family.

TO THE FAMILY

You are invited to view NATURE. As you watch the program, note the interactions between the wild elephants and their trainers. After the program, encourage your family to discuss the techniques used to domesticate or train animals.

Dear Mom and Dad,

We've been working hard trying to train the elephants. It's very different from our home town because . . .



THE HOLY ELEPHANT

The people of India consider the elephant to be a sacred creature, the earthly presence of a Hindu god named Ganesh. Using the library or the Internet, explore the history and mythology behind this tradition. Find examples of Indian art and relics that honor the elephant. What are some religious stories about Ganesh? When an elephant dies, what special ceremonies take place?

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WORKING WITH ANIMALS

In this program, there are a number of people who make their living working with elephants—from a veterinarian who helps heal injured elephants to the mahouts who use special techniques to tame wild elephants. After some research, create a colorful collage of at least five different jobs in which humans work with animals. Be sure to include the kind of preparation required for each type of career.

These materials were made possible by Canon U.S.A., Inc. and Ford Division of Ford Motor Company.

OBJECTIVES

Students will:

- examine the ways in which the oceans' water currents (the sea wind) affect the lives of various species of marine life as well as the humans that hunt them for food;
- explore the relationship between sea creatures and humans; and
- understand some ways in which ocean currents affect the underwater food chain.

VOCABULARY

You may wish to introduce students to the vocabulary before viewing the program.

abyss *noun:* the dark, cold underwater area deep below the surface.

currents *noun:* parts of a body of water (or section of air) that flow continuously in a certain direction.

predator *noun:* an animal that hunts other animals for food.

prey *noun:* an animal that is hunted by another animal.

SUGGESTED RESOURCES

Norris, Kenneth S. *Dolphin Days: My Life and Times with the Spinners.* New York: W.W. Norton, 1991

Sammon, Rick. *Seven Underwater Wonders of the World.* Charlottesville, VA: Thomasson-Grant, 1992.

Yellowfin Tuna
http://www.mackerel.com/fish/fishies/yellowfin.html

SMM Strategies For Pursuing A Career In Marine Mammal Science
http://www.rtis.com/nat/user/elsberry/marspec/mmstrat.html

HUNTERS OF THE SEA WIND

BROADCAST DATE: MARCH 2, 1997

PROGRAM OVERVIEW

Just as the sky has enormous and predictable wind paths, the ocean has powerful underwater currents. These currents create water highways for various species of marine life, as well as human hunters. "Hunters of the Sea Wind" follows predators and their prey over a 1,000-mile current that sweeps eastward to the Pacific coast of Panama, then north, past Costa Rica and beyond.

This program captures footage of rarely seen underwater behavior. Students will witness how the huge marlin, just before an attack on its prey, suddenly changes color from silvery stripes to an electric blue. Another scene depicts how dolphins, for some mysterious reason, often travel with large schools of yellowfin tuna.

"Hunters of the Sea Wind" also explores the ways in which sea creatures and humans influence each other. In some cases, humans are predators, hunting sea creatures for food to eat or as a source of income. At other times, humans preserve sea creatures' lives—such as when fishermen let dolphins, accidentally caught in their huge nets, escape unharmed.

Theme: "Hunters of the Sea Wind" illustrates how ocean currents affect underwater life and the humans who hunt and preserve these sea creatures.

BEFORE VIEWING THE PROGRAM

Introducing the Program

Write the names of the following creatures on small pieces of paper, and place them in a hat for students to select:

plankton • hammerhead shark • spinner dolphin • flying fish • yellowfin tuna • sea snake • blue marlin • swordfish • sailfish • barnacle • olive ridley sea turtle • lantern fish • manta ray • durado • whales • king angel • sea horse • booby (bird) • anchovetas • shrimp

After each student has selected one or more creature cards, explain that the program they are about to see focuses on the different ways sea creatures interact with each other. Some are both predator and prey, and some travel together to help catch food. Tell the students that as they watch "Hunters of the Sea Wind" they should try to answer the following questions for each animal card they have selected. How big is this sea creature? What does it eat? How does it find its food? What are this animal's predators? How does it avoid being eaten? How does it use the ocean currents? What habitats does it need during different parts of its life? What is its relationship with humans?

Distribute the Naturalist's Guide (student worksheet)

Duplicate and distribute the Naturalist's Guide (student worksheet) to students and preview it with them. As they watch the program, students should observe the ways that the oceans' currents influence the lives of sea creatures. In addition, they should pay close attention to the relationships between the humans and the sea creatures shown.

AFTER VIEWING THE PROGRAM

Encourage students to discuss the program and share their observations. The following questions may be used to spark discussion.

1. What is the significance of this program's title? ("Hunters of the Sea Wind" refers to marine predators' tendency to follow the oceans' currents in an effort to find food. It also refers to the humans who follow these currents in order to hunt these creatures.)

2. What are some of the benefits for small fish traveling together in large groups? (When large groups of small fish "cruise the currents" together, they can make it difficult for predators to focus on a single creature.)

3. What are some ways that the fishermen in this program care for certain sea creatures? (When they catch a sailfish, they return it to the ocean. In addition, when tuna fishermen accidentally catch dolphins, a law requires them to let the dolphins escape.)

4. What are some of the ways in which humans interact with fish? (Fish can serve as a source of food, a means of income, and house pets. They can also be caught for sport, studied for research, or observed in their habitats by scuba divers and snorklers.)

PROGRAM DATE:_____ TIME:_____ CHANNEL:_____

HUNTERS OF THE SEA WIND

A naturalist explores the predator-prey relationships among different creatures.

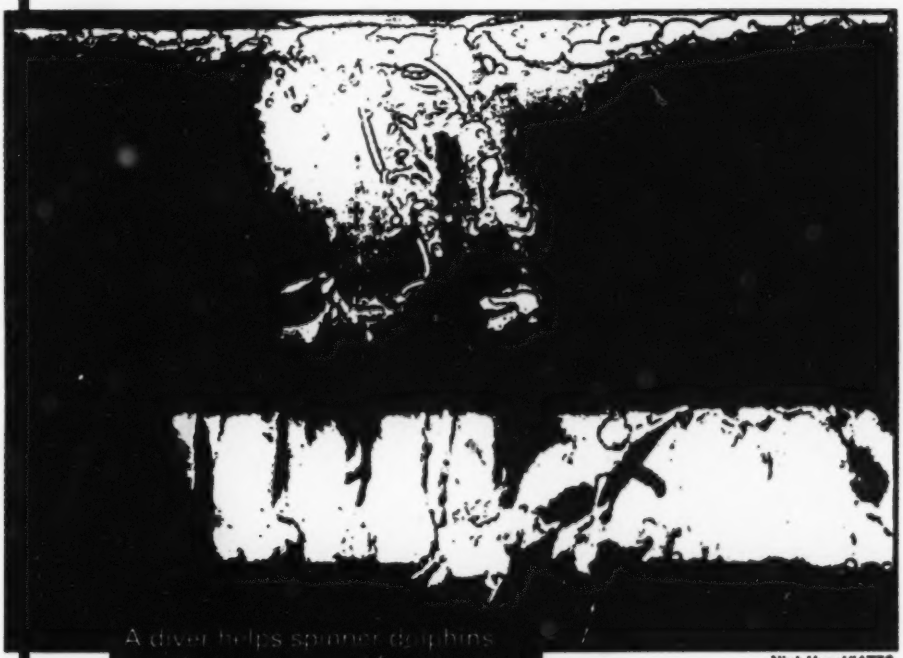
Complete the first activity and one other activity of your choice.

IT'S A FISH-EAT-FISH WORLD

As you view the program, take notes about the different species you find interesting. How do these species interact with each other? In what ways do these creatures interact with humans? Using information from the program, as well as facts uncovered through library research, create life-sized paper versions of creatures that are found along the "sea wind." You may want to use butcher-block paper for the larger creatures such as the blue marlin, yellowfin tuna, or dolphins. Students can present this graphic underwater food chain to other classes in the school.

TO THE FAMILY

You are invited to view NATURE. As you watch the program, look for the various ways that humans interact with sea creatures. After the program, share your observations with your family.



A diver helps spinner dolphins caught in a net used for yellowfin tuna fishing

Nick Vogel/IATTC

PRESTO CHANGO

Several creatures presented in this program go through quick physical changes just before they are about to kill their prey. The marlin's silvery stripes, for example, suddenly transform, becoming bright, electric-blue scales. The dorado also switches to a similar bold hunting pattern. Do some research on the reasons why scientists believe this behavior occurs. Do you think the change helps these fish catch their prey? Can you find examples of creatures in the sea (or on land) such as a cobra that change their appearance before they attack? What possible reasons might explain why these changes occur?

UNDERWATER BUDDIES

As the program shows, yellowfin tuna travel with dolphins. Scientists are not exactly sure why this relationship exists, but they think it might help both the tuna and the dolphins to catch food more efficiently. Using the library or perhaps the Internet, research about other animal pairs that spend their lives close together, such as the shark and the remora, the clownfish and the sea anemone, and so on. Work with one or two students to create a poster that presents the information you have learned.

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OBJECTIVES

Students will:

- examine the relationships people have with the dogs that they train or care for;
- observe the ways in which dogs can help and comfort humans; and
- compare and contrast the effects that humans and dogs have on one another.

VOCABULARY

You may wish to introduce students to the vocabulary before viewing the program.

breeding *noun:* the mating of domestic animals, sometimes done selectively for certain traits.

canine *noun:* any animal of the dog family, including domestic dogs, wolves, foxes, jackals, and coyotes.

domestic *adjective:* tamed; trained or bred for specific uses.

instinct *noun:* an inborn pattern of activity or reaction.

SUGGESTED RESOURCES

Fox, Michael. *Understanding Your Dog.* New York: St. Martin's Press, 1992.

Lemish, Michael. *War Dogs: Canines in Combat.* McLean, Va.: Brasseys, Inc., 1995

Thurston, Mary. *The Lost History of the Canine Race: Our 15,000-Year-Long Love Affair with Dogs.* Kansas City: Andrews and McMeel, 1996.

Canine Web
http://snapple.cs.washington.edu/canine/canine.html

Informational Dog-Related Web Sites
http://www.zmall.com/pet_talk/dog-faqs/lists/www-list.html#general

EXTRAORDINARY DOGS

BROADCAST DATE: MARCH 9, 1997

PROGRAM OVERVIEW

Everyone who has a dog believes their pet is extraordinary. Dogs exhibit a wonderful combination of intelligence, loyalty, and love. All they ask in return is food, water, and affection. Over thousands of years, humans and dogs have established a special bond. Dogs were first domesticated and trained as aids and companions to people. This relationship began with canines seeing their human companions as pack leaders that cared for, protected, and commanded them.

Most dogs lead simple (but important) lives as our pets and companions. But some canines have been trained to do some very extraordinary things. Service dogs help people with disabilities to lead more productive lives while keeping their companions from harm. Search and rescue dogs use their keen senses and instincts to aid people in dangerous situations. Dogs are put to work on farms, in police forces, as therapy for those who are lonely or in prison, and as movie and television stars.

Before we can understand the bond that humans have with dogs, we must aquire some basic knowledge about canine behavior. This touching NATURE episode uses personal stories about the relationships between individual dogs and their trainers and owners to give insight into a dog's world. "Extraordinary Dogs" shows how humans have used the natural instincts of dogs to train them to do remarkable things for us.

Theme: "Extraordinary Dogs" explores the special relationship between dogs and humans.

BEFORE VIEWING THE PROGRAM

Introducing the Program

Ask the students to relate any amazing dog stories they know based on their own experience, that of other people, or newspapers or television. Discuss the impact that dogs have had on the lives of the people in the tales. Also ask whether the students know of any dogs that can perform tricks. Tell the class that by living with dogs, in addition to finding companionship we learn about another species. After discussing their stories, tell the students that as they watch "Extraordinary Dogs," they will observe some dogs that have been called upon and trained to do some remarkable things for humans.

Distribute the Naturalist's Guide (student worksheet)

Duplicate and distribute the Naturalist's Guide (student worksheet) to students and preview it with them. As they watch the program, students should note the different types of dogs profiled and the various ways the dogs can be trained to interact with humans. They should also note the different kinds of relationships between the people and the dogs in the program.

AFTER VIEWING THE PROGRAM

Encourage students to discuss the program and share their observations. The following questions may be used to stimulate discussion.

1. What are some examples of the duties of war dogs? (They detect the enemy and sniff out explosives.)

2. What are the canine talents (senses or instincts) that humans have harnessed in the dogs profiled? (Smell, sight, hearing, speed, etc.)

3. What characteristics of the therapy dogs make them useful? (They are nonjudgmental and give unconditional love.)

4. After seeing all of the ways that dogs help and rescue us, how can humans help and rescue dogs? (Answers will vary—adopt a pound puppy, give money or food to a local animal shelter, give food, affection, or love to a dog.)

5. Why is it important that dogs perceive their owners and trainers as the pack leader? (Dogs need to follow a pack leader in order to be trained. Because of the dog's instincts, if the trainer doesn't show leadership, the dog will think of itself as the pack leader.)

6. Were all the dogs in the program specially bred for certain tasks? (No—many of the dogs were rescued from animal shelters.)

PROGRAM DATE:_____ TIME:_____ CHANNEL:_____

EXTRAORDINARY DOGS

A naturalist observes and studies the effects that humans and animals have on each other.

Complete the first activity and one other activity of your choice. _____

TO THE FAMILY

You are invited to view NATURE. As you watch the program, encourage your youngster to observe the different ways that dogs have been trained to help and comfort people. After the program, discuss what you have learned.

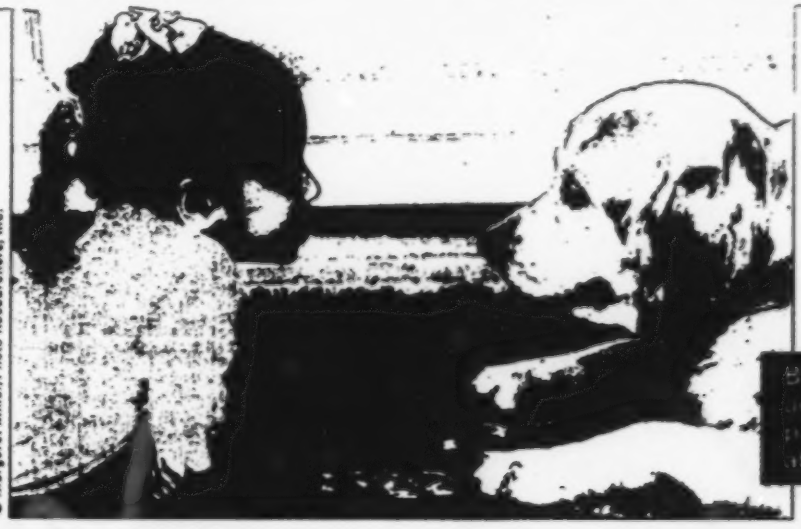
DOG DEEDS

Humans and dogs have a special bond. They can be companions, work partners, and friends. As you view the program, watch for the types of dogs profiled and some of the amazing things they do for humans. After viewing the program, list the different types of dogs featured and the ways they help the humans who care for them and train them. Also list what talents or senses each special kind of dog must draw upon for his or her job. Use the table format below.

Dog type	Service to humans	Abilities/senses used
Search and Rescue Dogs	Finding people buried in avalanches...	Sight, smell, hearing
Herding Dogs	Rounding up livestock...	Speed, agility, intelligence
Service Dogs	Helping the disabled...	
Seizure Alert Dogs		
Therapy Dogs		
War Dogs		
Performing Dogs		

A BREED APART

In "Extraordinary Dogs," we observe the many things that domestic dogs do to serve and protect humans. Many types of dogs were bred for certain tasks such as hunting, herding, or even as status symbols for royalty! Choose a dog breed that you would like to learn more about. As you research the breed, take note of the dog's place of origin, what tasks these dogs were bred for, and the ways in which the dogs have helped humans over time. What characteristics and behaviors were valued? Report your findings to your class.



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BASIC TRAINING

Most of the dogs profiled in the program went through rigorous training in order to perform their jobs. Did you notice similarities in the hand signals, voice commands, and rewards used by the trainers? The trainer must gain the dog's respect, and must also know some basic things about dog behavior. Go to your local library, veterinarian, or pet shop and use at least two books on dog training to research how you might train a dog. What do you need to know before training your dog? Research specific ways to teach dogs to sit, stay, heel, and fetch. How do you deal with a dog who has chewed up a shoe? What do the methods have in common? Present a specific DO's and DON'T's list for dog training to your class.

These materials were made possible by Canon U.S.A., Inc. and Ford Division of Ford Motor Company.

OBJECTIVES

Students will:

- examine the ways in which humans interact with other primates in a variety of settings (e.g., a park, a laboratory, a picnic);
- observe and discuss the skills that other primates can learn from humans and what humans can learn from studying other primates; and
- compare and contrast primate behaviors, methods of communication, and social interactions.

VOCABULARY

You may wish to introduce students to vocabulary before viewing the program.

art *noun:* creative skill acquired by experience, study, or observation.

intelligence *noun:* the ability to learn to understand or deal with new situations, or to use knowledge to manipulate one's environment.

gene *noun:* a unit of inheritance determined by a sequence of DNA (for example, eye color). Genes also control cell division and protein manufacture and are vital throughout life.

primates *noun:* the group of mammals that includes apes, monkeys, and humans.

pygmy chimpanzees *noun:* apes found in central Zaire, also known as bonobos.

self-awareness *noun:* an awareness of one's own personality or individuality.

tool *noun:* in primates, a hand-held device that aids in accomplishing a task.

SUGGESTED RESOURCES

Benyus, Janine M. *Beastly Behaviors.* Reading, Mass.: Addison-Wesley, 1992.

Carwardine, Mark. *Monkeys and Apes.* Ada, Okla.: Garrett Educational Corporation, 1989.

Goodall, Jane. *In the Shadow of Man.* Boston: Houghton Mifflin Company, 1988.

Chimpanzees and Bonobos
http://www.panda.org/research/facts/fct_chimp.htm

Primates
http://www.selu.com/~bio/primates/

MONKEY IN THE MIRROR

BROADCAST DATE: APRIL 6, 1997

PROGRAM OVERVIEW

We humans have long been fascinated with chimpanzees. While there are obvious differences between people and chimps, we share 98% of our genes with these animals. Scientists have found some uncanny similarities between humans and our closest living relatives. For example, researchers have shown that a baby chimpanzee develops at the same rate as a human infant for the first year of life, and that chimps learn to make and use simple tools in their natural habitats.

Scientists and philosophers may define human ability as being able to participate in politics, art, science, and language. But when viewing "Monkey in the Mirror," you will see that chimpanzees have complex "politics" in their social hierarchies. Some would even argue that primates other than humans are able to understand and to use language.

In "Monkey in the Mirror" we are introduced to a variety of primates, including chimpanzees, orangutans, baboons, and macaques, and the scientific methods used to study them. We see that apes can be self-aware, use tools, and may even be able to understand some forms of language. In this fascinating film, we can see ourselves reflected in the behaviors and societies of other primates.

Theme: "Monkey in the Mirror" shows that by studying the behavior and societies of other primates, we learn more about ourselves.

*PLEASE NOTE: "Monkey in the Mirror" contains scenes of pygmy chimpanzees (bonobos) that include explicit depictions of their sexual behavior, and **we recommend previewing the** program before assigning it to your students.*

BEFORE VIEWING THE PROGRAM

Introducing the Program

Ask students to volunteer answers to the question "What makes humans different from other animals?" After making a list of several examples, explain to the class that they will be viewing a program about primates other than humans. Explain that many human traits and behaviors are reflected in those of monkeys and apes. Tell the students that they will be seeing apes and monkeys doing things that scientists had thought only humans could do. After viewing the program, you may want to revisit the list as you discuss the behaviors and debate the abilities of humans and other primates.

Distribute the Naturalist's Guide (student worksheet)

Duplicate and distribute the Naturalist's Guide (student worksheet) to students and preview it with them. As they watch the program, students should note the similarities and differences between humans and the apes and monkeys profiled. They should also observe the interactions between the scientists and the primates as well as interactions among groups of primates.

AFTER VIEWING THE PROGRAM

Encourage students to discuss the program and share their observations. The following questions may be used to stimulate discussion.

1. What are the similarities between Merlin, the baby chimpanzee, and human babies during their first year? (They react to the mother's face, grasp with their fingers, make the motions of walking when held erect, and put things in their mouths.)

2. How do the macaques in the Japanese zoo react to overcrowding? (They keep their eyes down while eating and avoid contact with strangers.) What influence have humans had on the macaques? (Humans have given the monkeys unlimited food, which has led to abnormally large troupes and overcrowding.) Is this similar to how humans react in similar conditions? (Answers will vary.)

3. Describe some examples of how other primates use tools. (Using a stick to gather ants or termites for food and using rocks to crack open nuts.)

4. Name some examples of human activities that apes have learned or might imitate. (The painting chimp [June] and the orangutan doing laundry.)

PROGRAM DATE:_____ TIME:_____ CHANNEL:_____

MONKEY IN THE MIRROR

A naturalist sometimes compares behaviors within societies of humans and other animals.

Complete both activities

APE OR HUMAN?

As you view the program, take notes on the different behaviors demonstrated by the chimpanzees. After viewing, list the different behaviors and whether they are seen only in humans, only in apes, or in both species. You may want to use the chart format outlined below. How many similarities and differences can you find? Using this comparison, discuss the insights we gain about ourselves.

Behavior	Humans only	Apes only	Both
Taking care of young			
Politics			
Writing poetry			
Grabbing with the feet			
Grooming			
Making and wearing clothes			
Killing a member of the same species			

RESOURCE HUNT

All primates need food and a place to live. But often the wildlife habitats of primates or other animals are changed or destroyed by human beings who are mining, farming, or harvesting needed resources. Choose a primate species that you would like to learn more about. Then find out where this species lives in the wild. Research the kinds of farming, mining, and development that occur in the country or area where the primates live. How do you think the actions of humans in this area impact the species you are studying? Are there resources in this area that both humans and other primates use or need? Present your findings to your class.

TO THE FAMILY

You are invited to view NATURE. As you watch the program, encourage your youngster to observe the ways in which chimpanzees are similar to and different from human beings. Note also the different approaches scientists use to test the chimpanzees' communication and learning abilities. After the program, discuss some of the ways in which other primates both resemble and differ from humans.

These materials were made possible by Canon U.S.A., Inc. and Ford Division of Ford Motor Company.

VIDEO ORDERING INFORMATION

The NATURE programs featured in this guide, with the exception of "Hunters of the Sea Wind," are available on videocassette.

To order, write to:

WNET Video Distribution,
P.O. Box 2284, South Burlington, Vermont 05407-2284.
Please specify program title.

VIDEOTAPING RIGHTS

You can assign programs to your students for viewing when they are first broadcast; you also have the right to tape the programs and play them for instructional purposes for one year after the original broadcast.

Look for more information about NATURE on Thirteen/WNET's web site, wNetStation, on the Internet's World Wide Web (address: http://www.wnet.org). Copies of this teacher's guide may be downloaded from the site.

NATURE 1997

February 9–June 29 Schedule (check local listings)

Program	Broadcast Date
"Parrots: Look Who's Talking"	February 9
"The Elephant Men"	February 16
"A Lemur's Tale"	February 23
"Hunters of the Sea Wind"	March 2
"Extraordinary Dogs"	March 9
"Mozu the Snow Monkey"	March 16
"Dolphins: Close Encounters"	March 23
"Fire Bird"	March 30
"Monkey in the Mirror"	April 6
"Bower Bird Blues"	April 13
"Jaguar: Year of the Cat"	April 20
"Sperm Whales: The Real Moby Dick"	April 27
"Extraordinary Dogs"	May 4
"Spirits of the Jaguar" (four-part series)	May 11–14
"The Crater Lions"	May 18
"Warts and All"	May 25
"In the Lion's Den with Anthony Hopkins"	June 1
"The Call of Kakadu"	June 8
"A Wolf in the Fold"	June 15
"Tigers with Bob Hoskins"	June 22
"Lost World of the Medusa"	June 29

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